

REMARKS

Claims 1-25 are currently pending.

The amendment of Claims 1, 3, 5, 7, and 13 is supported by the original disclosure, including Figures 2A, 2B, 3E, and 3F. New Claims 21-25 have been added. Support for new Claims 21-23 is found in Figure 3F. Support for new Claims 24 and 25 is found in Figure 4.

It is respectfully submitted that no new matter has been added.

Specification

The specification was objected to by the Patent Office to as failing to provide proper antecedent basis for the claimed subject matter. The term electrical connection is found on page 7, lines 5-22, and page 8, lines 7-24, of the specification (part numbers 204 and 328). The paragraph from page 6, line 25, to page 7, line 4, of the specification has been expanded to describe Figures 2A, 2B, 3E, and 3F in geometric terms, including planar terminology to describe a major plane and a minor plane. It is believed that no new matter has been added. The Patent Office is respectfully requested to withdraw the objections to the specification.

Drawings

The drawings were objected to under 37 CFR 1.83(a). The terms “first plane,” “second plane,” and “third plane” have been deleted from the claims. The term electrical connection is found on page 7, lines 5-22, and page 8, lines 7-24, of the specification (part numbers 204 and 328). The term “signal layer” is found in Figure 4. The terms “major plane” and “minor plane” have been added to the specification and correspond to the X-Y or X-Z planes in drawing figures 2A and 2B.

Claim Rejections – 35 U.S.C. 112, First Paragraph

Claims 1-20 were rejected under 35 U.S.C. 112, First Paragraph, as failing to comply with the written description requirement. The relevant language in Claim 1 has been cancelled. The specification has been expanded to describe the configuration of the

electrical connection shown in Figures 2A, 2B, 3E, and 3F as well as the major and minor planes. Claim 20 has been reworded to clarify the relationship illustrate in Figure 3F. The Patent Office is respectfully requested to withdraw its rejection of Claims 1-20 under 35 U.S.C. 112, First Paragraph.

Claim Rejections – 35 U.S.C. 112, Second Paragraph

Claims 7-20 were rejected under 35 U.S.C. 112, Second Paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As regards Claims 7, 14, and 20, the text of the specification has been amended to explain the invention illustrated in Figures 2A, 2B, 3E, and 3F using standard geometric terminology. Applicant believes that no new matter is being introduced because the descriptive language corresponds to the drawing elements and arrangements that were originally filed.

Claim 13 has been amended. Applicant notes that a contact may be a solder ball (see page 6, lines 3-5, of the specification).

It is respectfully submitted that no new matter has been added and respectfully requested that the Patent Office withdraw the rejections of Claims 7-20 under 35 U.S.C. 112, Second Paragraph.

Claim Rejections – 35 U.S.C. 102(b)

Claims 1-19 were rejected under 35 U.S.C. 102(b) as being anticipated by Gedney et al., U.S. Patent No. 5,483,421.

The present invention relates to a converter device in which a pinout of an integrated circuit does not conform to the size, shape, and pinout of a circuit board to which it is mounted. The converter device reroutes the signal three dimensionally to electrically connect the desired pin of the integrated circuit with the circuit board. The converter device includes one or more converter boards.

A reference must disclose all non-inherent limitations of a claim to anticipate that claim. MPEP 2131.

Claims 1-6 recite that the contact of the contact on one side of a converter device electrically connects to a contact on the other side of the converter device in which the two contacts have offsets along an x axis, a y axis and a z axis. The relationship is illustrated in Figures 2A, 2B, 3E, and 3F. Gedney shows that the contacts are offset along two axes, but not a third. Thus, Gedney does not anticipate Claims 1-6.

Claim 5 recites a board including a power plane and a ground layer. This limitation is illustrated in Figure 4. Gedney does not teach a power plane or a ground layer. Thus, Claim 5 is allowable over Gedney for this additional reason.

Claims 7-20 recite the electrical connection extends two dimensionally with the converter device in a plane parallel to the planes of the circuit board and the integrated circuit. As the planes are parallel, they would never intersect. Gedney does not teach the electrical connection extending two dimensionally in a converter device in a plane parallel to the planes of major extension of the integrated circuit and the circuit board. Thus, Gedney does not anticipate Claims 7-20.

Claim Rejections – 35 U.S.C. 103(a)

The Patent Office rejected Claim 20 as being unpatentable over Gedney et al., U.S. Patent No. 5,483,421.

When applying 35 U.S.C. 103, the following tenets of patent law must be adhered to: (A) the claimed invention must be considered as a whole; (B) the references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination; (C) the references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention; and (D) reasonable expectation of success is the standard with which obviousness is determined. *See MPEP § 2141 and Hodosh v. Block Drug Co., Inc.*, 786 F.2d 1136, 1143 n.5, 220 USPQ 182, 187 n.5 (Fed. Cir. 1986).

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Ryoka*, 180 U.S.P.Q. 580 (C.C.P.A. 1974). *See also In re Wilson*, 165 U.S.P.Q. 494 (C.C.P.A. 1970).

Claims 20 recites solder balls for three sets of contacts. Gedney does not teach or suggest this limitation. Official Notice has been taken alleging that it is known to have a

second board with a second set of contacts formed of solder balls. Applicant challenges the Patent Office to provide a reference disclosing the limitation of Claim 20. Applicant believes that Gedney does not make obvious Claim 20.

New Claims

Claim 21 recites three sets of round contacts, Claim 22 recites three sets of spherical contacts, and Claim 23 recites four sets of round contacts. Gedney does not teach or suggest these limitations. Thus, Gedney does not anticipate or make obvious Claims 21-23.

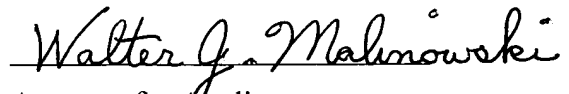
Claim 24 recites a converter device structure of alternating layers including dielectric layers and a signal layer. Gedney does not teach or suggest the limitations of Claim 24. Thus, Gedney does not anticipate or make obvious Claim 24.

Claim 25 recites that the dielectric layers adjacent to the signal layer are thicker than other dielectric layers. Gedney does not teach or suggest this limitation. Thus, Gedney does not anticipate or make obvious Claim 25.

CONCLUSION

In light of the forgoing amendments and arguments, reconsideration of the claims is hereby requested, and a Notice of Allowance is earnestly solicited.

Respectfully submitted,



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